A New Cave Spider in Japan

Toshihiro KOMATSU

(Kamisuwa, Nagano Prefecture)

Sunitorypha n. g. (Theridiidae, Thridiinae)

This genus is allied to *Theridion* Walck. 1805 and *Sphyrotinup* E. Simon 1894.

Direct eyes are slightly smaller than the Ist indirecr eyes, and are placed in front of the latters. Rows of indirect eyes are incurved. Median ocular area made up of the direct and 3rd indirect eyes, is narrower anteriorly than posteriorly. 3rd indirect eyes are larger than the directs. Clypeus is longer than the diameter of the direct eye, but shorter than the length of the median ocular area. Median thoracic fovea is a round pit.

Chelicera slender, and the superior margin of fang groove armed with three strong teeth and the inforior margin with eight little teeth. Middle space between both margins are also decorated with some little teeth. Maxillae paralleled, and longer than broad. Labium is semicircular, not rebordered, rather wider than long. Pedipalpus of the female has a toothed claw, male has no tibial apophysis, but tarsal segment has a large projection with many branches at the base.

Legs : Tarsus is shorter than metatarsus, Ist pair longer longer than 4th. The 4th leg with a row of teeth at basal half of paired claws. These teeth grow gradually longer and longer from proximally to the middle part. Inferior claw is provided with some teeth. Tarsus of the 4th leg has some tarsal combs. Pedicle is short.

Abdomen is oblong in male and is ovoid in female. Scapus is smooth and conical in shape. Colulus is somewhat large and conícal in shape. Anterior spinnerets are contiguous, and posteriors separated to each other.

Genotype species : *Sunitorypha linyphoides* n. sp.

Sunitorypha linyphoides n. sp.

(Japanese name Myōzin-himegumo)

Loc. ahd Date : -Kazaana cave, Nagano Prefecture Jun. 8th, 1948 adult 1♂. July, 1st, 1948 adult 2♀

I Adult ♂

Measurements in millimetres : -Total length 3.9 Cephalothorax 2.0 width 1.7 Abdomen 2.3 width 1.4

Segments / Appendages	Total	Femur	Patella	Tibia	Metatarsus	Tarsus
1st leg	14.5	4.2	0.7	4.0	4.2	1.4
2nd leg	10.9	3.4	0.8	2.9	2.6	1.2
3rd leg	8.2	2.5	0.7	1.9	2.2	0.9
4th leg	10.6	3.6	0.7	3.0	2.1	1 2
Palp	2.7	0.9	0.2	0.4	—	1.2

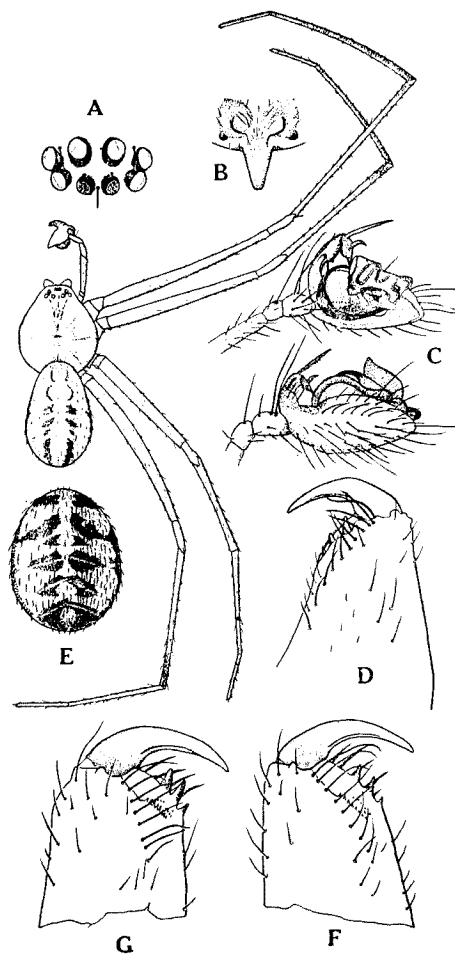
Cephalothorax ; redish brown, has dull black edge and three black bands with black spines from ocular area to posterior edge. Median fovea is a round pit, and radiating grooves are evident. Eight eyes are round in shape.

	in ratio
Diameter of direct eye	5.5
〃 1st inderect eye	7.0
〃 2nd indirect eye	6.5
〃 3th indirect eye	7.0
Interval of direct eye	2.5
〃 direct eye and 1st indirect eye	2.0
〃 1st indirect eye and 2nd indirect eye	1.0
〃 2nd indirect eye and 3rd indirect eye	3.0
〃 3rd indirect eyes	5.0
Median ocular area	
Length of behind	18.0
〃 front	13.0
〃 side	16.0
〃 clypeus	11.0

Chelicera weak and slender, has three teeth on the anterior and eight teeth on the posterior margin of the furrow and tiny teeth in the furrow. Maxillae are paralleled, longer than wide in the ratio 2.5 : 1.6, pale yellow and white a tapical end. Labium dull yellow and black at base, semicircular, wider than long in the ratio 16 : 13. Sternum truncated in front, bluntly produced backward, is longer than wide in ratio 55 : 52.

Legs redish brown, have not any spines. Abdomen dull brown with pairs of dull white bars on its dorsum.

II Adult ♀

Total length 4.4mm. Cephalothorax 1.9mm Abdomen 2.7mm. Abdomen brownish grey, has four paired of dull white spots on its upper side. Tarsus of palp has a claw with some teeth.

Sunitorypha linyphoides n. sp. ♂

A. Eyes of ♂　B. Epigynum of ♀　C. Palp of ♂　D. Chelicera of ♂　E. Abdomen of ♀

洞穴産及び野外産ミヨウジンヒメグモの大顎の比較

F. 風　穴　産　　　　G. 諏訪神社 上社産

摘要： *Sunitorypha linyphoides* の和名ミョウジンヒメグモは諏訪神社の祭神である諏訪明神をとつたものである．これについては次のような理由がある．

最初の採集地は諏訪盆地の南限をなす．中部地溝帯の断層面の盆地面から約 100m ほど上った非石灰洞の風穴である．地籍は諏訪市湖南，風穴山龍雲寺と呼ばれる曹洞宗の寺の裏山の急傾斜をなす雑木林の中に開口する．この風穴は *Ulobia hexommata* ウロタナグモ，*Leptoneta speciosa* カザアナマシラグモ，*Acattyma roretzii* カネコトタテグモ，それに未発表のタナグモ科の *Spereocicurina* 属の新種が棲んでいる．洞穴としては相当古いものに属するように考えている．

ミョウジンヒメグモはこの洞穴の光線の僅かに射しこむあたりから暗黒界にかけて相当数が棲息し，網に輝く珠数状の水滴や，絲に憩う蚊の群，網の上部にかゝるオオヒメグモ状の卵袋など極めて印象的である．ミョウジンヒメグモは光線の入る部分に棲むものは体色が濃く，暗黒界のものは色彩が乏しく勿論移行型を認める．我々が光りを認め得ない個所に於てさえも洞穴の奥のものの方がより白化する傾向を認めることから色素の形成と光線の量とは微量な単位で関係しているように思われた．この洞穴内の分布を調べているうちに，このくもは Schioedte 氏と Schiner 氏の Transient cave spiders に近いもののように考えた．そこで洞穴外を相当探してみたが，乾燥していてとてもみつかりそうもない．次第に調査の範囲を拡げ，2km ほど離れた諏訪神社の上社の社叢まできてみるとこの天然林に狭い溪流がある．溪流は幅が狭いばかりでなく急流のために飛沫がとび，両岸は深いこけにおゝわれており，その個所にヒメグモ独特の網がみつかつた．くわしく調べてみると体色は黒いが特徴はそつくりである．たゞ前牙堤の3歯は長さも太さも明瞭に大きく，後牙堤も歯が長いようである．（第二図参照）が同一種として差閊えはない．

洞穴の蜘蛛を中心に歴史的にみていくと，最初の洞穴を訪ね再び去つて行く Cave visiting spiders の群のうち，洞穴内に久しく生活できる Cave loving spiders の群は洞穴に住みつき外部の同種とも交渉があるであろうが，洞穴の外部の条件がかわつて洞外と隔離されて，Permanent cave spiders として変異が行われていくものと推定した場合，このミョウジンヒメグモは Cave loving spiders から Permanent cave spiders への移行の途上にあるものと推定して支障ないように考える．

擱筆にあたり岸田久吉先生の御援助のあったことを記して深く感謝の意を表します．